

AMENDMENTS TO THE SPECIFICATION

I. Please replace the SPECIFICATION, pages 1 - 7, with the following amended SPECIFICATION:

Background of the Invention

1. Field of The invention

The present invention ~~is to~~ provides a coding method with dynamic positioning. More particularly, the dynamic positioning coding method is used in ~~the grain~~ a die pick-up process. By using the dynamic positioning coding method provided in the present invention, ~~it~~ a positioning system can effectively pick-up ~~the grain~~ a die from a wafer and then put it to ~~the~~ a bin.

2. Description of the Prior Art

In the traditional ~~grain~~ die pick-up process, ~~it~~ the apparatus first ~~clarifies~~ classifies the exclusive bin for each grade of the ~~grain~~ dies. Then, it picks up all the ~~grains~~ dies from one wafer into the exclusive bin ~~of~~ for the ~~each~~ respective grade. Each ~~grain~~ die herein ~~is with~~ has multiple semiconductor circuit components, and the wafer has ~~the~~ a rectangular array of ~~the~~ a multiple-die grain arrangement.

~~Please referring~~ Referring to Figure 1, ~~it~~ there is shown, a prior art ~~showing a grain~~ die pick-up process. One of the ~~grains~~

dies 1 is picked up from ~~the~~ a fixed place position on of the wafer 2. The pick-up method can remove the ~~grain die~~ from the wafer 2 through the pick-up apparatus 3. The pick-up apparatus can be a robotic arm, and the wafer 2 can be supported by the wafer base. By the position from rotating the wafer base, the relative movement between the robotic arm and the wafer base leads the ~~grain die~~ being picked from the wafer, and then, the ~~wafer die~~ is moved to the exclusive bin 4 ~~of the grain~~. This kind of conventional ~~grain die~~ pick-up method can easily ~~remove~~ move the wafer into the right position, particularly for ~~the~~ large-size wafers. According to the ~~fast~~ first change of the technique development, the size of the wafer becomes larger, but the ~~grain becomes dies~~ become more and ~~denser~~ more dense. Therefore, the distribution range in the different grades of the ~~grains~~ dies is broader. The traditional design of positioning systems, with a robotic arm trying to rotate the wafer and put the ~~grain dies~~ in the right position becomes more complicated and more difficult. This has a restriction on the equipment, and the accuracy of the ~~gain die~~ pick-up process ~~faces the problem~~.

Referring More, please referring to Figure 2, [[. It]] is a prior art ~~showing the~~ flow chart of the prior art ~~grain die~~ pick-up process is shown. ~~By using~~ Using the conventional technique to pick-up from the wafer, firstly ~~it tests in step 501~~ all the ~~grain die~~ sorts on the wafer ~~501 are tested~~, then, it ~~clarifies~~ the sorts are classified into multiple ~~consequent~~ resulting grades. For example,

they ~~are~~ range from the first grade to the twelfth grade. Further, ~~it assigns in step 502~~ the N-th bin is assigned as the exclusive bin for the ~~grain die~~ of the N-th grade ~~502~~. For example, the first bin is for the first grade of ~~the grain dies~~. Then, in step 503 the wafer is rotated and it leads ~~the grain~~ a die of the N-th grade to be positioned on the down side ~~503~~ of the pick-up apparatus. ~~More~~ Further, it picks up in step 504 the ~~grain die~~ of the N-th grade is picked up, and then ~~puts it~~ is put into the exclusive bin ~~504~~ for the ~~grain die~~ of the N-th grade. Finally, in decision step 505, ~~it can~~ is determined if all of the ~~grains dies~~ have been picked up completely ~~505~~. If all of the ~~grains are~~ dies have been completely picked up ~~completely~~, ~~it implements the grain die pick-up process has been implemented~~. However, if it is not completed, the ~~grain die pick-up process will be continuous~~ continue to be performed until ~~finishing~~ all the ~~grain dies have been~~ picked-up. ~~While In addition to~~ the grades of the ~~grains dies~~ in the wafer ~~are with~~ have a broad distribution range, ~~the~~ a large movement range in the pick-up apparatus occurs as ~~well as~~ do other problems ~~happens~~. ~~More~~ Further, some un-reaching unreachable dead angles will ~~happen~~ result.

Summary of the Invention

According to the above description, the present invention ~~is to~~ provides a coding method with dynamic positioning. It can effectively improve the ~~grain die~~ pick-up process. By using the

dynamic positioning coding method, ~~it firstly picks up one of any~~
~~one of the dies is first picked up~~ grains, and ~~tests it~~ tested as well
as being defined ~~defines it~~ as a grade for the ~~grain die~~. Then, ~~it~~
~~puts the grain die is put into~~ a bin, and ~~defines the bin is defined~~
as the exclusive bin for the grade of the ~~grain in die at~~ the same
time. Then, ~~it continues to~~ the process continues with the dies
being picked up the grain until all of the grains dies are in their
exclusive bins. ~~It does not arrange the~~ The exclusive bins are not
arranged in advance, ~~but only defines~~ the exclusive bins only
being defined for the actual ~~grain die~~ grade distribution. This can
~~fast complete~~ speed up the completion of the grain die pick-up
process ~~thereto~~ and shorten the movement distance of the ~~grain die~~
pick-up process. Further, it can effectively overcome the problem
of large movement distance in the pick-up apparatus as well as
more complicated problems. The process of ~~the grain die~~ pick-up
can be accurate and more efficient.

Summary of the Invention

The present invention ~~is mainly to~~ provides a coding method
with dynamic positioning. More particularly, ~~it~~ the present
invention is used in a ~~grain die~~ pick-up process. The dynamic
positioning coding method does not arrange the exclusive bins in
advance, but only defines the exclusive bins for the actual ~~grain~~
die grade distribution. This can ~~fast~~ quickly complete the ~~grain die~~
pick-up process. Further, it can shorten the movement distance of
the pick-up apparatus. ~~More~~ Further, it can effectively solve the

problem of ~~the~~ large movement distance in the pick-up apparatus as well as other complicated problems. Therefore, the ~~grain die~~ pick-up process can be more ~~accuracy~~ accurate and more ~~efficiency~~ efficient.

For a more complete understanding of the present invention and for further advantages thereof, reference is now made to the following description taken in conjunction with the accompanying drawing, in which:

Brief Description of the Drawings

Figure 1 is a conventional ~~grain die~~ pick-up graph;

Figure 2 is one conventional ~~grain die~~ pick-up flow chart; and

Figure 3 is a ~~one of the~~ preferred ~~embodiments~~ embodiment according to the present invention showing the flow chart of the dynamic positioning coding method for sorting ~~grain die~~.

Detailed Description of the Preferred Embodiments

The present invention ~~is to~~ provides a coding method with dynamic positioning. More particularly, the dynamic positioning coding method is used in the ~~grain die~~ pick-up process. It uses the ~~grain die~~ pick-up step of the dynamic positioning coding method to pick up one of the ~~grains dies~~, and then tests the ~~grain die~~. According to the result of the ~~grain die~~ testing, it ~~clarifies~~ classifies the grade for the ~~grain die~~. ~~More~~ Further, it puts the ~~grain die~~ to one of the bins. In the meantime, the bin is ~~clarified~~

classified as an exclusive bin for the grade of the grain die. Further, it continues ~~the~~ to complete the pick-up process until all the grains dies are in their exclusive bins. The present invention only defines the exclusive bins for the actual grain die grade distribution ~~thereto~~ thereof to quickly complete ~~fast-completes~~ the grain die pick-up process. This can shorten the movement distance of the pick-up apparatus. ~~More~~ Further, it can effectively solve the problem of the large movement of the pick-up apparatus as well as other complicated problems. Therefore, the grain die pick-up process can be made more ~~accuracy~~ accurate and more ~~efficiency~~ efficient.

For a further description, please ~~referring~~ refer to Figure 3. It Fig. 3 is a flow chart of one of the preferred embodiments according to the present invention showing ~~the flow chart of~~ the dynamic positioning coding method for sorting grains dies. The dynamic positioning coding method according to the present invention is used in the grain die pick-up process. ~~It first picks up~~ First, in step 601 the N-th grain 601 in the step die is picked-up by using a pick-up apparatus to perform the pick-up motion. ~~[[,]]~~ The pick-up apparatus can be a robotic arm. Apart from this, in step 602, it tests the grade for the N-th grain ~~602 is tested~~. The method for testing the grain die can be a yield test. The result of the yield test can recognize the condition of the defect in the grain die ~~covering with semiconductor thereto~~ and treat it as a classification standard. By this standard, the grains dies can be divided into

multiple grades. The expression for the grade can be a natural number, an integral or a defect percentage. Then, in step 603 it ~~determines~~ is determined if the grade of the ~~grain die~~ has its an exclusive bin ~~603~~. If there is an exclusive bin, it ~~puts~~ the N-th ~~grain die is put~~ into the N-th exclusive bin of ~~the~~ that grade in step 604. If there is no exclusive bin, then, in step 605 it ~~picks~~ the M-th bin ~~and defines it~~ is defined as an exclusive bin for the N-th ~~grain die~~ or ~~the grain~~ a die with the same grade ~~605~~. M here is a natural number. Further, in step 606 the pick-up apparatus goes back and checks if there are is any ~~grain~~ un-picked ~~606 dies~~. If there ~~is~~ are no ~~grain-unpicked~~ more dies to pick-up, then, it ~~completes the pick-up process~~ is completed in step 607. If there is still a ~~grain-unpicked die to be picked-up~~, then, it ~~repeats the steps~~ 601-606 are repeated to continue for further the pick-up process.

For example, first, it ~~picks up~~ the ~~first grain~~ closest die is picked-up in step 601, and ~~tests the first grain as the first grade~~ tested in step 602. The ~~If the~~ tested grade in step 602 is the first grade, and in step 603 it ~~has to~~ is determined if the grade of the ~~grain die~~ has its an exclusive bin ~~603~~ for the first ~~exclusive bin~~ grade. If so, the ~~first grain die~~ is put into the exclusive bin for the first grade in step 604. If not, then, the ~~first~~ closest bin is ~~picked up~~ selected and ~~is defined~~ as the exclusive bin ~~605~~ for the grade of the ~~grain die~~ in step 605. Further, in step 606 it ~~determines~~ is determined if there is any ~~grain there~~ ~~606~~ more dies. If there is still ~~one~~ another die, it the process goes back to the first step for

picking up the N-th ~~grain~~ die and continues until ~~finishing~~ all of the ~~grain pick-up~~ dies are picked-up. According to the above description, the present invention ~~is to~~ provides a dynamic positioning coding method. It does not arrange the exclusive bins in advance, but only defines the exclusive bins for the actual ~~grain~~ die grade distribution. This can ~~fast~~ quickly complete the ~~grain~~ die pick-up process ~~thereto~~ and shorten the movement distance of the ~~grain~~ die pick-up ~~process~~ apparatus. Further, it can effectively overcome the problem of large movement distance in the pick-up apparatus as well as more complicated problems. The process of the ~~grain~~ die pick-up can be accurate and more efficient.

~~In conclusion, the present invention meets novelty, improvement, and is applicable to the industry. It therefore meets the essential elements in patentability. There is no doubt that the present invention is legal to apply to the patent, and indeed we hope that this application can be granted as a patent.~~

Although the present invention has been described in detail, with respect to alternate embodiments, various changes and modifications may be suggested to one skilled in the art, and it should be understood that various changes, suggestions, and alternations can be made hereto without departing from the spirit and scope of the invention as defined by the appended claims.